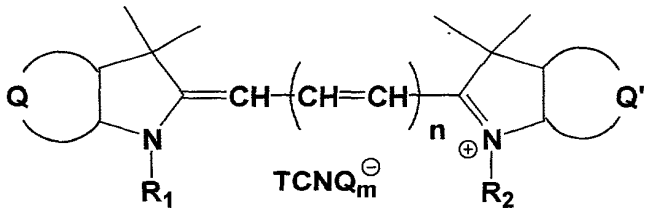
CLAIMS

What is claimed is:

1. A kind of cyanine-TCNQ complex dyes mixture (II, III, and IV) used as the data storage media having the structural formula (I) as follows:



(I)

wherein Q and Q' are selected from one of aromatic and polyaromatic, R1 and R2 are selected from the group consisting of alkyl, arylester, alkoxy, alkylthio, and alkoxythio etc., n represents an integer of 0, 1, 2, and 3, TCNQ-m represents 7,7',8,8'-tetracyanoquinodimethane and its derivatives, and m represents an integer of 1 or 2.

2. A cyanine TCNQ complex dye used for the data storage media of claim 1, wherein said in cyanine TCNQ dye (I), n represents an integer of 0, 1, 2, and 3, R1 is $-CH_2C_6H_4COOCH_3$, R2 is linear alkyl group (carbon number is C1~C18), and m represents an integer of 1 or 2.

3. A cyanine TCNQ complex dye used for the data storage media of claim 1, wherein said in cyanine TCNQ dye (I), n represents an integer of 0, 1, 2, and 3, R1 and R2 are both of $-CH_2C_6H_4COOCH_3$, and m represents an integer of 1 or 2.

4. A cyanine TCNQ complex dye used for the data storage media

of claim 1, wherein said in cyanine TCNQ dye (II), n=1, R1 is –$CH_2C_6H_4COOCH_3$, R2 is linear butyl group; in cyanine TCNQ dye (III), n=1, R1 and R2 are both of –$CH_2C_6H_4COOCH_3$; in cyanine TCNQ dye (IV), n=2, R1 and R2 are both of –$CH_2C_6H_4COOCH_3$.

5. A cyanine TCNQ complex dye used for the data storage media of claim 1, wherein said while it is preparing the data storage media by using this cyanine TCNQ complex dye, the reflection layer is selected from the group consisting of Au, Ag, Al, Cu, Cr, and its alloy.

6. A cyanine TCNQ complex dye used for the data storage media of claim 1, wherein said while it is preparing the data storage media by using this cyanine TCNQ complex dye obtained from the combination of cyanine TCNQ dye (II) and cyanine TCNQ dye (IV), and the weight percentage of cyanine TCNQ dye (IV) to TCNQ dye (II) can be 0.5 % ~20 %.

7. A cyanine TCNQ complex dye used for the data storage media of claim 1, wherein said while it is preparing the data storage media by using this cyanine TCNQ complex dye obtained from the combination of cyanine TCNQ dye (II) and cyanine TCNQ dye (IV), and the weight percentage of cyanine TCNQ dye (IV) to TCNQ dye (II) can preferably be 2%~10%.

8. A cyanine TCNQ complex dye used for the data storage media of claim 1, wherein said while it is preparing the data storage media by using this cyanine TCNQ complex dye obtained from

the combination of cyanine TCNQ dye (II) and cyanine TCNQ dye (IV), and the weight percentage of cyanine TCNQ dye (II) to the total solution (including TCNQ dye (II), TCNQ dye (IV), and solvent) can be 0.5%~10%.

9. A cyanine TCNQ complex dye used for the data storage media of claim 1, wherein said while it is preparing the data storage media by using this cyanine TCNQ complex dye obtained from the combination of cyanine TCNQ dye (II) and cyanine TCNQ dye (IV), and the weight percentage of cyanine TCNQ dye (II) to the total solution (including TCNQ dye (II), TCNQ dye (IV), and solvent) can preferably be 1%~5%.

10. A cyanine TCNQ complex dye used for the data storage media of claim 1, wherein said while it is preparing the data storage media by using this cyanine TCNQ complex dye obtained from the combination of cyanine TCNQ dye (III) and cyanine TCNQ dye (IV), and the weight percentage of cyanine TCNQ dye (IV) to TCNQ dye (III) can be 0.5%~20%.

11. A cyanine TCNQ complex dye used for the data storage media of claim 1, wherein said while it is preparing the data storage media by using this cyanine TCNQ complex dye obtained from the combination of cyanine TCNQ dye (III) and cyanine TCNQ dye (IV), and the weight percentage of cyanine TCNQ dye (IV) to TCNQ dye (III) can preferably be 2%~10%.

12. A cyanine TCNQ complex dye used for the data storage media of claim 1, wherein said while it is preparing the data storage

media by using this cyanine TCNQ complex dye obtained from the combination of cyanine TCNQ dye (III) and cyanine TCNQ dye (IV), and the weight percentage of cyanine TCNQ dye (III) to the total solution (including TCNQ dye (III), TCNQ dye (IV), and solvent) can be 0.5%~10%.

13. A cyanine TCNQ complex dye used for the data storage media of claim 1, wherein said while it is preparing the data storage media by using this cyanine TCNQ complex dye obtained from the combination of cyanine TCNQ dye (III) and cyanine TCNQ dye (IV), and the weight percentage of cyanine TCNQ dye (III) to the total solution (including TCNQ dye (III), TCNQ dye (IV), and solvent) can preferably be 1%~5%

14. A cyanine TCNQ complex dye used for the data storage media of claim 1, wherein said while it is preparing the data storage media by using this cyanine TCNQ complex dye, the organic solvent can be selected one of from the following compound: 2,2,3,3-tetrafluoropropanol, alcohol, ketone, ether, chloroform, dichloromethane, and DMF etc.

15. A cyanine TCNQ complex dye used for the data storage media of claim 1, wherein said while it is preparing the data storage media by using this cyanine TCNQ complex dye, the fluorescent recording layer components consist of at least cyanine TCNQ complex dye, polymer resin, and interfacial glue.

16. A cyanine TCNQ complex dye used for the data storage media

of claim 1, wherein said while it is preparing the data storage media by using this cyanine TCNQ complex dye, the fluorescent recording layer does not contain any photostabilizing agent.